



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/807,457 | 03/24/2004 | Mitsugi Chonan | 032405. | 2933 |
| 441 | 7590 | 08/02/2006 | EXAMINER | |
| SMITH, GAMBRELL & RUSSELL 1850 M STREET, N.W., SUITE 800 WASHINGTON, DC 20036 | | | LE, DAVID D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3681 | |

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/807,457 | CHONAN ET AL. | |
| | Examiner | Art Unit | |
| | David D. Le | 3681 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>07/17/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the third Office action on the merits of Application No. 10/807,457, filed on 24 March 2004. Claims 1 and 3-9 and 12 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Foreign Priority Document, received on 03/24/04
 - Information Disclosure Statement, received on 03/24/05
 - Information Disclosure Statement, received on 06/17/04
 - Declaration, received on 06/17/04
 - Power of Attorney, received on 09/15/04
 - Information Disclosure Statement, received on 02/21/06
 - Information Disclosure Statement, received on 7/17/06

Response to Amendment

3. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamauchi in view of U. S. Patent Application Publication No. US 2003/0092529 A1 to Gu et al.**

Claims 1, 3 and 5-9:

Yamauchi (i.e., Figs. 3 and 4; paragraphs [0036] to [0049]) discloses a drivetrain comprising:

- a. A crankshaft driven (i.e., Fig. 4, element 34) by an engine (i.e., Fig. 4, element 7), said crankshaft being arranged in a vehicle body in a widthwise direction of the vehicle body (i.e., Fig. 3);
- b. A sub-shaft (i.e., Fig. 4, element 46) which is arranged parallel to said crankshaft and non-concentric with the crankshaft and to which the rotation of said crankshaft is transmitted via a rotary transmission member (i.e., Fig. 4, being the combination of elements 41 and 47);
- c. A belt type continuously variable transmission (i.e., Fig. 4, element 50) including a primary shaft (i.e., Fig. 4, element 53) arranged concentrically with said sub-shaft and provided with a primary pulley (i.e., Fig. 4, element 51) having a variable groove width

and a secondary shaft (i.e., Fig. 4, element 56), said secondary shaft being provided with a secondary pulley (i.e., Fig. 4, element 54) coupled to said primary pulley via a belt (i.e., Fig. 4, element 57) and having a variable groove width;

- d. Wherein the rotation of said crankshaft is transmitted to said primary shaft via said sub-shaft, which is arranged parallel to said primary shaft, and said crankshaft is mounted with a generator (i.e., Fig. 4, element 43);
- e. Wherein said crankshaft is arranged in front of said primary shaft in a longitudinal direction of the vehicle body (i.e., Fig. 3);
- f. Wherein said secondary shaft is arranged behind said primary shaft in a longitudinal direction of the vehicle body (i.e., Fig. 3);
- g. Wherein said rotary transmission member is a pair of gears (i.e., Fig. 4, elements 41 and 47) mounted on said sub-shaft and said crankshaft; and
- h. A crankcase (i.e., Fig. 4, element 24) that mounts said crankshaft.

Yamauchi lacks:

- a. A centrifugal clutch member that is arranged between the sub-shaft and the primary shaft and housed in the crankcase.

Gu (i.e., Fig. 3; paragraph [0034]), on the other hand, teaches a hybrid power system comprising:

- a. A centrifugal clutch member (i.e., Fig. 3, element 60A); and
- b. Wherein the centrifugal clutch member is arranged between a primary shaft member (i.e., Fig. 3, element 21) and a pulley shaft member (i.e., Fig. 3, element 62A).

It would have been obvious to one of ordinary skill in the art at the time this invention was made to modify Yamauchi to include a centrifugal clutch such that the centrifugal clutch is arranged within the crankcase (24) between the sub-shaft (46) and the primary shaft (53), in view of Gu, in order to provide a disengagement between the engine and the transmission during the start-up of the engine.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamauchi in view of Gu et al. as applied to claims 1, 3 and 5-9 above, and further in view of U. S. Patent Application Publication No. US 2002/0033295 to Korenjak et al.

Claim 4:

Yamauchi in view of Gu discloses the limitations as set forth in paragraph 9 above. Regarding claim 4, Yamauchi lacks a recoil starter, which is mounted on the sub-shaft.

Korenjak (i.e., Fig. 1; paragraph [0138]), on the other hand, teaches a drivetrain for an all terrain vehicle comprising:

- A redundant starting system including a recoil starter (i.e., Fig. 1, element 66), mounted on a shaft member (i.e., Fig. 1, element 12), which is coaxial with the primary shaft of the primary pulley.

It would have been obvious to one of ordinary skill in the art at the time this invention was made to further modify Yamauchi to include a recoil starter such that the recoil starter is arranged on the sub-shaft, in view of Korenjak, in order to facility the start-up of the engine when the starter motor is inoperative.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamauchi in view of U. S. Patent Application Publication No. US 2003/0092529 A1 to Gu et al. and U. S. Patent Application Publication No. US 2002/0033295 to Korenjak et al.

Claim 12:

Yamauchi (i.e., Figs. 3 and 4; paragraphs [0036] to [0049]) discloses a drivetrain comprising:

- a. A crankshaft driven (i.e., Fig. 4, element 34) by an engine (i.e., Fig. 4, element 7), said crankshaft being arranged in a vehicle body in a widthwise direction of the vehicle body (i.e., Fig. 3);
- b. A sub-shaft (i.e., Fig. 4, element 46) which is arranged parallel to said crankshaft and non-concentric with the crankshaft and to which the rotation of said crankshaft is transmitted via a rotary transmission member (i.e., Fig. 4, being the combination of elements 41 and 47);
- c. A belt type continuously variable transmission (i.e., Fig. 4, element 50) including a primary shaft (i.e., Fig. 4, element 53) arranged concentrically with said sub-shaft and provided with a primary pulley (i.e., Fig. 4, element 51) having a variable groove width and a secondary shaft (i.e., Fig. 4, element 56), said secondary shaft being provided with

Art Unit: 3681

a secondary pulley (i.e., Fig. 4, element 54) coupled to said primary pulley via a belt (i.e., Fig. 4, element 57) and having a variable groove width;

d. Wherein the rotation of said crankshaft is transmitted to said primary shaft via said sub-shaft, which is arranged parallel to said primary shaft, and said crankshaft is mounted with a generator (i.e., Fig. 4, element 43);

e. Wherein said crankshaft is arranged in front of said primary shaft in a longitudinal direction of the vehicle body (i.e., Fig. 3);

f. Wherein said secondary shaft is arranged behind said primary shaft in a longitudinal direction of the vehicle body (i.e., Fig. 3);

g. Wherein said rotary transmission member is a pair of gears (i.e., Fig. 4, elements 41 and 47) mounted on said sub-shaft and said crankshaft; and

h. A crankcase (i.e., Fig. 4, element 24) that mounts said crankshaft.

Yamauchi lacks:

a. A centrifugal clutch member that is arranged between the sub-shaft and the primary shaft and housed in the crankcase; and

b. A recoil starter, which is mounted on the sub-shaft.

Gu (i.e., Fig. 3; paragraph [0034]), on the other hand, teaches a hybrid power system comprising:

a. A centrifugal clutch member (i.e., Fig. 3, element 60A); and

b. Wherein the centrifugal clutch member is arranged between a primary shaft member (i.e., Fig. 3, element 21) and a pulley shaft member (i.e., Fig. 3, element 62A).

Korenjak (i.e., Fig. 1; paragraph [0138]), on the other hand, teaches a drivetrain for an all terrain vehicle comprising:

- A redundant starting system including a recoil starter (i.e., Fig. 1, element 66), mounted on a shaft member (i.e., Fig. 1, element 12), which is coaxial with the primary shaft of the primary pulley.

It would have been obvious to one of ordinary skill in the art at the time this invention was made to modify Yamauchi to include a centrifugal clutch such that the centrifugal clutch is arranged within the crankcase (24) between the sub-shaft (46) and the primary shaft (53), in view of Gu, and a recoil starter such that the recoil starter is arranged on the sub-shaft, in view of Korenjak, in order to provide a disengagement between the engine and the transmission during the start-up of the engine, as well as to facilitate the start-up of the engine when the starter motor is inoperative.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 3-9 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3681

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



ddl



RODNEY H. BONCK
PRIMARY EXAMINER
ART UNIT 3681